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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,864	10/30/2003	Kouichi Uesaka	500.43242X00	6688

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EXAMINER

AL NAZER, LEITH A

ART UNIT PAPER NUMBER

2821

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/695,864

Applicant(s)

UESAKA ET AL.

Examiner

Leith A. Al-Nazer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-18 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 30 October 2003 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

Drawings

2. The drawings are objected to because reference numbers 105a, 105b, 105c, and 105d should be changed to reference numbers 106a, 106b, 106c, and 106d, respectively, in order to properly relate to the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

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should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:
 - a) Reference numbers 1101c and 1101d found in figures 10 and 11 is not addressed in the specification.
 - b) Reference number 1002:d found in figures 10 and 11 is not addressed in the specification.

Appropriate correction is required.

Claim Objections

4. Claim 18 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is

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required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 18 recites "The narrow-directivity antenna probe... comprising the opposite-phase excited antenna probe." This limitation is already recited in parent claim 17.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites "said two or more grounded-electric-potential conductor flat-plates." There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-3, 5, 7-12, and 14-18 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,741,220 to Inoue.

With respect to claim 1, Inoue teaches a narrow-directivity antenna probe comprising a main antenna probe (4a) for performing the measurement of or said irradiation with said electric field or said magnetic field, and an opposite-phase excited antenna probe (4c) located in proximity to the main antenna probe in order to narrow the directionality of the main antenna probe (figure 1; column 11, lines 41-60).

With respect to claim 2, Inoue teaches at least two or more of the opposite-phase excited antenna probes being located in proximity to the main antenna probe (figure 1; column 11, lines 24-60).

With respect to claim 3, Inoue teaches the opposite-phase excited antenna probes being located in proximity to the main antenna probe in a symmetric arrangement (figure 1).

With respect to claim 5, Inoue teaches an electromagnetic field generated by the opposite-phase excited antenna probe having a phase difference of $\pi \pm \pi/2$ [rad] with respect to an electromagnetic field generated by the main antenna probe, the opposite-phase excited antenna probe being located in order to narrow the directionality of the main antenna probe for performing the measurement of or the irradiation with the electric field of the magnetic field (column 11, lines 41-60).

Claims 7 and 14 require an electromagnetic-field measurement apparatus for using the narrow-directivity antenna probe according to claims 17 and 10, respectively, so as to measure the proximate electric-field or magnetic-field distribution in proximity to

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an electronic appliance or the like. Inoue teaches all the structural elements and relations outlined in parent claims 17 and 10, respectively. Therefore, inherently, the structure taught or suggested by Inoue could be used as an electromagnetic-field measurement apparatus.

Claims 8 and 15 require an electric-current distribution search-for apparatus for using the narrow-directivity antenna probe according to claims 17 and 10, respectively, so as to measure the proximate electric-field or magnetic-field distribution in proximity to an electronic appliance or the like, and for determining the electric-current distribution by calculation from a result of the measurement. Inoue teaches all the structural elements and relations outlined in parent claims 17 and 10, respectively. Therefore, inherently, the structure taught or suggested by Inoue could be used as an electric-current distribution search-for apparatus.

Claims 9 and 16 require an electrical-wiring diagnosis apparatus for using the narrow-directivity antenna probe according to claims 17 and 10, respectively, so as to irradiate an electronic appliance or the like with an electric field or a magnetic field, and for detecting a signal thereby to check the electrical-wiring connection state of the electronic appliance or the like, the signal being generated at a terminal of the electronic appliance or the like by an electric voltage or an electric current induced by the electric field or the magnetic field. Inoue teaches all the structural elements and relations outlined in parent claims 17 and 10, respectively. Therefore, inherently, the structure taught or suggested by Inoue could be used as an electrical-wiring diagnosis apparatus.

With respect to claim 10, Inoue teaches a narrow-directivity antenna probe comprising a main antenna probe (4a) for performing the measurement of or the irradiation with the electric field or the magnetic field, and a grounded-electric-potential conductive flat-plate (3a-3h) located in proximity to the main antenna probe in order to narrow the directionality of the main antenna probe (column 10, lines 46-49).

With respect to claim 11, Inoue teaches two or more grounded-electric-potential conductor flat-plates (3a-3h in figure 1).

With respect to claim 12, Inoue teaches the grounded-electric-potential conductor flat-plates being located in proximity to the main antenna probe in a symmetric arrangement (3a-3h in figure 1).

With respect to claims 17 and 18, Inoue teaches a narrow-directivity antenna probe for performing the measurement of or the irradiation with an electric field or a magnetic field, comprising a main antenna probe (4a) for performing the measurement of or the irradiation with the electric field of the magnetic field; and a member located in proximity to the main antenna probe (4c or 3a-3h) in order to narrow the directionality of the main antenna probe, wherein the member is at least one of an opposite phase excited antenna probe (4c in figure 1; column 11, lines 41-60) and a grounded-electric-potential conductive flat-plate (3a-3h in figure 1; column 10, lines 46-49).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Patent No. 6,741,220 to Inoue in view of U.S. Patent No. 5,940,048 to Martek.

Claims 6 and 13 require a narrow-directivity antenna probe system for using the narrow-directivity antenna probe according to claims 17 and 10, respectively, in plural number so as to isolate and observe electromagnetic fields from wave sources existing in a desired spacious region, or so as to superimpose electromagnetic fields on each other in a desired spacious region thereby to generate an electromagnetic field that is more intense than the electromagnetic field generated in the case of the single narrow-directivity antenna probe. It is well known in the art to utilize an array of similar antenna structures, as is evidenced by Martek (figure 3; column 6, line 47 – column 7, line 7). Therefore, it would have been obvious to one having ordinary skill in the art to utilize a plurality of antenna structures in the system of Inoue. The motivation for doing so would have been to strengthen or superimpose electromagnetic signals.

Allowable Subject Matter

12. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach or suggest one or more of the limitations found in claim 4. Specifically, the prior art of record fails to teach or suggest a supply electric-power to the opposite-phase excited antenna probe being made smaller than a supply electric-power to the main antenna probe, or a reception electric-power of the opposite-phase excited antenna probe being attenuated and superimposed on a reception signal of the main antenna probe.

Citation of Pertinent References

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents further show the state of the art with respect to narrow-directivity antenna probes:

- a) U.S. Patent No. 4,301,457 to Bogner


Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leith A. Al-Nazer whose telephone number is 571-272-1938. The examiner can normally be reached on Monday-Friday, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LA


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